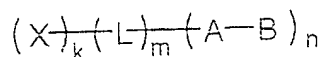


Formula (I)



a) wherein, in the above formula, X represents a silver halide adsorption group or light absorption group which contains at least one atom of N, S, P, Se or Te, L represents a (k + n)-valent bridging group containing at least one atom of C, N, S or O, A represents an electron-donating group, B represents a leaving group or a hydrogen atom, A-B is dissociated or deprotonated after oxidation to generate a radical A', k represents 0-3, m represents 0 or 1, and n represents 1 or 2, provided that when k = 0 and n = 1, m = 0;

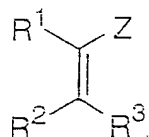
(i) compounds producing imagewise a chemical species that can form development initiation points on and in the vicinity of the non-photosensitive silver salt of an organic acid,

(ii) compounds that provide increase of developed silver grain density to a level of 200-5000% when added in an amount of 0.01 mol/mol of silver,

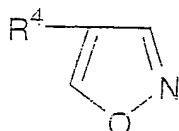
(iii) compounds that provide increase of covering power to a level of 120-1000% when added in an amount of 0.01 mol/mol of silver, and

(iv) compounds represented by any one of the following formula (1) to (3):

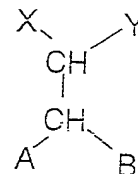
Formula (1)



Formula (2)



Formula (3)



wherein:

in the formula (1),  $R^1$ ,  $R^2$  and  $R^3$  each independently represents a hydrogen atom or a substituent,  $Z$  represents an electron withdrawing group, and  $R^1$  and  $Z$ ,  $R^2$  and  $R^3$ ,  $R^1$  and  $R^2$ , or  $R^3$  and  $Z$  may be combined with each other to form a ring structure,

in the formula (2),  $R^4$  represents a substituent, and

in the formula (3),  $X$  and  $Y$  each independently represent a hydrogen atom or a substituent,  $A$  and  $B$  each independently represents an alkoxy group, an alkylthio group, an alkylamino group, an aryloxy group, an arylthio group, an anilino group, a heterocycloxy group, a heterocyclylthio group or a heterocyclylamino group, and  $X$  and  $Y$  or  $A$  and  $B$  may be combined with each other to form a ring structure.